
On the Management of Outbreaks of Smallpox.

When smallpox or persons who have been exposed to smallpox come into your town, act quickly. When there are rumors of infectious persons or things, investigate at once.

The powers of local boards of health are ample enough in almost any contingency. See "Rules and Regulations" and powers and duties of local boards of health in "Abstract of the Health Laws."

The *duty* of the board is to act promptly. The whole matter is in the hands of the local board. No time should be wasted in running around to get the consent or approval of the municipal officers or anyone else. Your town will be obliged to pay all reasonable and honest bills, and the more promptly you act the smaller the bills will be.

If any person breaks quarantine, violates the provisions of the health laws, or interferes with the work of the board so as to prevent the execution of the provisions of the law, have him arrested at once. If infectious, he can be held in any kind of a "shack" until he can be disinfected and brought before a justice for trial.

Suspects, or Exposed Persons.

Trace out as speedily as possible every person who has been exposed to the infection of smallpox. Make a note of the date of exposure.

When located, vaccinate every such person as soon as possible. Vaccinate also all of the members of his family or of the household in which he lives.

As to the question of quarantining a person who has been exposed to smallpox:

If he is a transient, keep him under close quarantine. If he is a permanent resident and trustworthy, keep him under observation.

Persons who have been exposed to smallpox should be considered under two classes:

(1) Those who have been exposed but once to the infection and are immediately vaccinated. These should be kept

under observation until there are unmistakable evidences of the success of the vaccination, when they can be discharged from further surveillance.

(2) Persons who have been exposed to smallpox and several days (over four) have elapsed before vaccination. These should be kept under observation sixteen days from their last possible exposure. The wearing of their own infected clothing should be deemed a continuation of their exposure.

As soon as a person has been isolated on account of exposure to smallpox, give him a change of clothing (in warm weather, overalls and a blanket may suffice), have him disinfect his hands, face, head and beard, at least, by washing in a 1:1000 solution of corrosive sublimate. For the whole body, 1:2000 or 1:3000 would be safer. Disinfect his clothing as soon as possible and have him put it on again.

Persons who are under quarantine or under observation on account of exposure to smallpox should be inspected by a physician at least once daily during the period of incubation.

Vaccination.

In the vaccination of persons who have been exposed to smallpox, "time is money." The failure of prompt vaccination sometimes costs towns much money. The persons exposed and all members of their families should not only be vaccinated as quickly as possible, but the vaccination should be done again and again, if necessary, until a "take" results, or there are other good reasons to believe that all these persons are fully protected.

Prompt vaccination is required for the exposed person that the vaccination may get ahead of smallpox and modify it or prevent it entirely, and for the persons housed or associated with him the aim should be the speediest possible "takes," so that these persons may be fully protected if the person already exposed develops smallpox.

If, after persuasion and reasoning with them, suspects refuse to be vaccinated, apply an absolute quarantine, just as long as may be necessary.

As to the value of vaccination, it may be said that the protective power of a recent and successful vaccination is nearly if not quite as absolute as that from a previous attack of smallpox.

As to the dangers and diseases which may come from vaccine virus, it is safe to say that they hardly exist with the strict governmental supervision of the production of vaccine

which is now in effect, and that undue soreness of the arm as a result of secondary infections of the vaccinated spot with the germs which are always present in the skin and in the clothing, and which sometimes cause inflammation and even suppuration may be controlled by local applications when occasionally they are needed.

The health officer, even if not recently vaccinated, need not hesitate to attend promptly to any duty which an emergency may present. If he is exposed to smallpox and is carefully vaccinated soon afterward (within one or two days, although the sooner the better) the vaccination, on account of its more rapid development will get ahead of the smallpox and prevent it.

Quarantine.

The quarantine of every smallpox patient should be prompt and absolute. If there is the slightest reason to suspect that the members of the household may not be trustworthy, a guard should be placed over every infected house day and night, and special visits should be made at unexpected hours to see whether the guards are doing their duty faithfully.

Nurses.

When it is known that persons have been exposed to smallpox, the local health officers should promptly arrange for the worst. Facilities for the quarantine and the treatment of the sick should be considered before the actual cases are on hand. Nurses and medical attendants should conditionally be engaged in advance.

For nurses, have persons who are thoroughly protected by a recent successful vaccination, or who have had smallpox.

Hospitals and Camps.

When smallpox breaks out, the question will often arise whether the sick shall be kept and cared for in their houses, or the houses in which they are found, or shall be removed to other quarters. When practicable to do so, their removal is desirable. If removed, the house from which they are taken should be disinfected with the least possible delay.

When a house is not available as a hospital, a temporary camp or shed may quickly be built, which will be safe and comfortable for patients and attendants.

Persons who have been exposed to smallpox and persons who show uncertain symptoms of the disease should not be confined with smallpox patients, until the diagnosis of smallpox is clear.

For advice about disinfection see Circular 220, "The Work of Disinfection."

Brief Points for Non-Medical Members of Boards of Health.

The period of incubation of smallpox—time from exposure to the first symptoms of the disease—is twelve days on the average. It may be longer or shorter. In about three days more the eruption begins to show as small red specks, and then as pimples or papules, at first on the forehead and wrists, gradually extending over the body so that the eruption becomes general in about twenty-four hours. On the first and second days of the eruption it is papular, and the characteristic "shotty" sensation is obtained by passing the fingers over the skin. During the next twenty-four hours the papules become vesicles, with clear summits.

In ordinary cases the vesicular stage lasts about two days and then the vesicles, increasing in size and turning yellow, become pustules, remaining so about four days before they begin to dry down so that scabs are formed. But in the mild and atypical cases of smallpox the eruption, or much of it, may go through its transformation much more rapidly, or much of the eruption may abort at various stages, going no farther than the papular or vesicular stage.

The onset of the disease is usually sudden with chilliness, fever, headache, pain in the limbs, nausea—some or all of those symptoms, just about as they are in an attack of influenza, or grip. With the appearance of the eruption, or some hours before, there is a sudden drop in the temperature, the other symptoms get better or disappear, and many smallpox patients then say they feel as well as ever except the annoyance due to the eruption. In mild cases there is no return of the symptoms, and the patients need but little of the attention of the physician until his judgment is wanted to determine whether the time has come when they may safely be released from quarantine after the required disinfection has been done. But in the severer cases with profuse eruption the temperature rises again on the seventh or eighth day and this "secondary fever" is the most critical stage in bad cases.

Smallpox is an intensely infectious disease, but rather less so before the eruption has appeared. The patient is infectious until the skin is entirely cleared of crusts, and until the secondary desquamation of the pock marks has ceased.

The period during which it is necessary to quarantine for the safety of the public varies in different cases from three to six weeks, or even longer.